OPTICAL LIQUID LEVEL SENSORS

210.02en

DESCRIPTION AND APPLICATION

Optical liquid level sensors are intended for measurement, regulation and control of production in foodstuff (e.g. beverages production) or pharmaceutical industry. They are used also in applications of sensing of a tank filling or emptying, min. and max. liquid level detection, a pump dry run protection etc.

Variants of optical liquid level sensors:

- **Type „A"** – suitable for oil liquids (e.g. cooling emulsions, oil, crude oil, hydraulic oil, milk, etc.)
- **Type „B"** – suitable for liquids with foam (e.g. beer, „cola" type soft drinks) and other liquids (e.g. water)

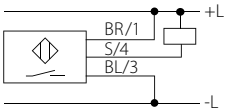


SPECIFICATIONS

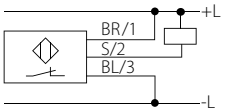
Sensor	With temperature range up to 100 °C		With temperature range up to 140 °C	
	with cable	with connector	with cable	with connector
Nominal voltage Un	24 V DC			
Supply voltage Uc	12 – 30 V DC			
Supply current Ic	< 25 mA			
Output current Iz	≤ 200 mA			
Output indicator	LED			
Reversed polartity protection	YES			
Switching distance (% of a dipped setting tip)	< cca 50 %			
Switching frequency	35 Hz			
Temperature range T	-25 °C to 100 °C – temperature in a process -25 °C to 80 °C – ambient temperature		-25 °C to 140 °C –temperature in a process -25 °C to 80 °C – ambient temperature	
Case material / sensing tip	stainless steel / crystall glass			
Maximum operating pressure	2 MPa			
Ingress protection	IP 68	IP 67	IP 68	IP 67
	in accordance with EN 60529, as amended			
Connection type	cable PVC 3 x 0,25 mm²; 2 m	connector M12	cable PUR 3 x 0,25 mm²; 2 m	connector M12

WIRING DIAGRAM

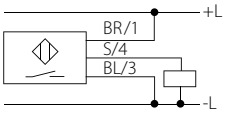
With cable / NPN normally open



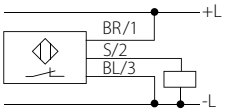
With cable / NPN normally closed



With cable / PNP normally open



With cable / PNP normally closed



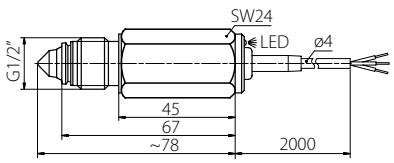
BR - brown / S - black / BL - blue

with connector

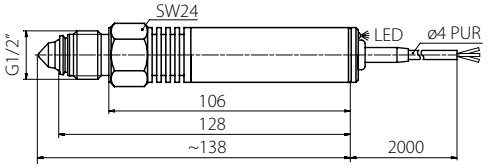


DIMENSIONAL DRAFT

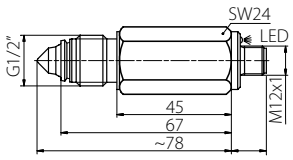
With temperature range up to 100 °C, with cable



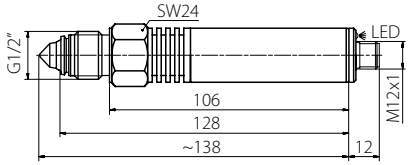
With temperature range up to 140 °C, with cable



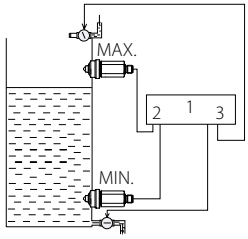
With temperature range up to 100 °C, with connector



With temperature range up to 100 °C, with connector

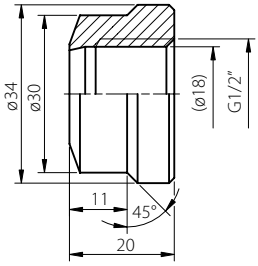


OPERATING PRINCIPLE



1/ CONTROL UNIT, 2/ INPUT, 3/ OUTPUT

MOUNTING NUT



ORDER REFERENCE NUMBER

Version		With temperature range up to 100 °C				With temperature range up to 140 °C			
Output		Cable version		Connector version		Cable version		Connector version	
		TYPE „A“	TYPE „B“	TYPE „A“	TYPE „B“	TYPE „A“	TYPE „B“	TYPE „A“	TYPE „B“
NPN	normally open	POS 187 311 A	POS 187 311 B	POS 187 411 A	POS 187 411 B	POS 287 311 A	POS 287 311 B	POS 287 411 A	POS 287 411 B
	normaly closed	POS 187 312 A	POS 187 312 B	POS 187 412 A	POS 187 412 B	POS 287 312 A	POS 287 312 B	POS 287 412 A	POS 287 412 B
PNP	normally open	POS 187 313 A	POS 187 313 B	POS 187 413 A	POS 187 413 B	POS 287 313 A	POS 287 313 B	POS 287 413 A	POS 287 413 B
	normaly closed	POS 187 314 A	POS 187 314 B	POS 187 414 A	POS 187 414 B	POS 287 314 A	POS 287 314 B	POS 287 414 A	POS 287 414 B